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 NEWS  2  Sep 17  IMSworld Pharmaceutical Company Directory name change
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 NEWS  3  Oct 09  Korean abstracts now included in Derwent World Patents
                  Index
 NEWS  4  Oct 09  Number of Derwent World Patents Index updates increased
 NEWS  5  Oct 15  Calculated properties now in the REGISTRY/ZREGISTRY File
 NEWS  6  Oct 22  Over 1 million reactions added to CASREACT
 NEWS  7  Oct 22  DGENE GETSIM has been improved
 NEWS  8  Oct 29  AAASD no longer available
 NEWS  9  Nov 19  New Search Capabilities  USPATFULL and USPAT2
 NEWS 10  Nov 19  TOXCENTER(SM) - new toxicology file now available on STN
 NEWS 11  Nov 29  COPPERLIT now available on STN
 NEWS 12  Nov 29  DWPI revisions to NTIS and US Provisional Numbers
 NEWS 13  Nov 30  Files VETU and VETB to have open access
 NEWS 14  Dec 10  WPINDEX/WPIDS/WPIX New and Revised Manual Codes for 2002
 NEWS 15  Dec 10  DGENE BLAST Homology Search
 NEWS 16  Dec 17  WELDASEARCH now available on STN
 NEWS 17  Dec 17  STANDARDS now available on STN
 NEWS 18  Dec 17  New fields for DPCI
 NEWS 19  Dec 19  CAS Roles modified
 NEWS 20  Dec 19  1907-1946 data and page images added to CA and CAplus
 NEWS 21  Jan 25  BLAST(R) searching in REGISTRY available in STN on the Web
 NEWS 22  Jan 25  Searching with the P indicator for Preparations
 NEWS 23  Jan 29  FSTA has been reloaded and moves to weekly updates
 NEWS 24  Feb 01  DKILIT now produced by FIZ Karlsruhe and has a new update
                  frequency
 NEWS 25  Feb 19  Access via Tymnet and SprintNet Eliminated Effective 3/31/02

 NEWS EXPRESS  February 1 CURRENT WINDOWS VERSION IS V6.0d,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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L4 1272 L1 AND L3

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L5 14287 CHEMILUMINESCENT

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L6 22 L4 AND L5

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L6 ANSWER 1 OF 22 CA COPYRIGHT 2002 ACS
TI Use of charge coupled devices for the simultaneous detection of multiple pesticides by imaging ELISA techniques
AB The **chemiluminescent** reaction between horse radish peroxidase (HRP)/ alk. phosphatase (AP) and the luminol/CSPD/hydrogen peroxide substrate is used in a multianal. ELISA approach to simultaneous anal. of different pesticides. The pesticides included in the present study were 2,4-D, atrazine and simazine. A novel variant of peroxidase (from transgenic tobacco, TOP) has also been investigated. The microformat ELISA previously described was employed using thick film hydrophobic pattern on glass plates with flat **wells** of 2 .mu.L capacity. In addn., sol-gel modified glass capillaries were also employed. As detection system for the **chemiluminescent** reaction we used a **photomultiplier** tube (PMT) or a charge coupled device (CCD) camera. For the PMT/CCD camera based assay the monoclonal antibodies (mAbs) were dild. 1:1000 and bound to the surface during an over night incubation at 4.degree.C. Non bound antibodies were removed by washing with PBST buffer and the free space was blocked with 2.7 mg mL-1 of the gelatin-based blocking reagent. For 2,4-D a detection range of 0.1-100 ng mL-1 was obtained. Work with real samples and with mixts. of pesticides is under way.
SO ACS Symp. Ser. (2000), 762(Chemical and Biological Sensors for Environmental Monitoring), 223-235
CODEN: ACSMC8; ISSN: 0097-6156

L6 ANSWER 2 OF 22 CA COPYRIGHT 2002 ACS
TI In-situ stratospheric ozone measurements by means of a fast ozone sensor (FOZAN) onboard the M55-Geophysica aircraft
AB High time-resolved measurements of ozone during high-altitude flights can

address many scientific question regarding stratospheric ozone depletion, exchange processes across the tropopause and potential vorticity barriers, such as the polar vortices and the subtropical barrier, and the microphysics of ozone in clouds. A Fast OZone ANalyzer (FOZAN) was developed and installed on board M55-Gheophysica, a stratospheric platform able to reach an altitude of more than 20 km. FOZAN is a joint Russian-Italian instrument and uses the **chemiluminescent** heterophase reaction between ozone in the airflow and a solid state sensor; the luminescence intensity is proportional to ozone concn., and it is registered by a **photomultiplier**. The devices includes an automatic self-calibrator, as **well** as an optical modulator, pump, microprocessor unit, air valve, ozone generator, ozone destroyer, and thermostabilizer. This instrument comprises an electronic unit to control the instrument performance and to process measurement data. To improve the instrument sensitivity and measurement precision, synchronous digital detection and signal averaging are performed. The instrument lso features a built-in calibrated ozone generator. The instrument was tested during test flights in Italy and was operated successfully during flights over mid-latitudes and the Arctic region. A tropical campaign in the spring of 1999 over the InterTropical Convergence Zone (ITCZ) took place in the frame of the THESEO project. The paper presents the design of the instrument and the result of lab. tests, as **well** as preliminary results of scientific flights on board the M55- Geophysica aircraft.

SO Proc. SPIE-Int. Soc. Opt. Eng. (1999), 3756(Optical Spectroscopic Techniques and Instrumentation for Atmospheric and Space Research III), 502-510
CODEN: PSISDG; ISSN: 0277-786X

L6 ANSWER 3 OF 22 CA COPYRIGHT 2002 ACS

TI A rapid and sensitive 384-microtiter **wells** format **chemiluminescent** enzyme immunoassay for clenbuterol

AB A fast and sensitive **chemiluminescent** (CL) enzyme immunoassay for clenbuterol (CLB) anal. in bovine urine has been developed. Clenbuterol (CLB) specific polyclonal antibodies were raised in rabbit using a CLB azo deriv. conjugated with ovalbumin. Horseradish peroxidase (HRP) was used as label and conjugated with the same deriv. In the developed competitive method, antibodies were immobilized on 384-**wells** black polystyrene microtiter plates; the sample vol. was 20 .mu.l and HRP-labeled CLB activity was immediately measured, using different CL substrates, after 10 min incubation time. Emitted light was recorded using a sensitive back-illuminated, cooled CCD camera or a conventional, **photomultiplier**-based microtiter plate reader. The developed method fulfills all the requirements of precision (CV below 10%) and accuracy (mean recovery from 96 to 110%) with a detection limit of 0.08 ppb in urine matrix. The use of 384-**wells** microtiter plate allows a 5-fold redn. in reagent quantity and the CL detection improves the detectability of the HRP-labeled tracer, thus reducing anal. time. The developed method is therefore suitable for high-throughput screening of CLB in urine samples, with reduced costs as compared with conventional colorimetric enzyme immunoassays, thanks to the possibility to optimize the system in non-equil. immunol. conditions and with a very fast chemiluminescence detection of the HRP-label activity.

SO Talanta (2000), 52(2), 311-318
CODEN: TLNTA2; ISSN: 0039-9140

L6 ANSWER 4 OF 22 CA COPYRIGHT 2002 ACS

TI Method and analyzer for immunoassay using magnetic particles

AB Magnetic particles as solid phase are mixed in a reaction vessel with a sample, e.g., body fluid, that contains the analyte TSH as **well** as a labeled antibody. A **chemiluminescent** labeling compd. is bound to the magnetic particles by an immune reaction. The fluid contg. the mixt. is introduced into a chamber inside a flow-through cell wherein the width of the chamber is larger than the depth. The magnetic particles in the fluid are retained with a magnet so that they are spread out over the inner surface of the chamber while the other material is removed. The chamber then is filled with a buffer soln. that contains an attracting substance. By applying a potential to the electrodes arranged in the

chamber, the labeling compd. on the magnetic particles is stimulated to emit electrochemiluminescence, and the luminescence is detected with a **photomultiplier**.
SO Ger. Offen., 23 pp.
CODEN: GWXXBX

L6 ANSWER 5 OF 22 CA COPYRIGHT 2002 ACS
TI Integrating biotinylated polyalkylthiophene thin films with biological macromolecules: Biosensing organophosphorus pesticides and metal ions with surface-immobilized alkaline phosphatase utilizing chemiluminescence measurements
AB The authors describe a methodol. for immobilizing the enzyme alk. phosphatase onto a glass surface using a novel biotinylated copolymer poly(3-undecylthiophene-co-3-thiophenecarboxaldehyde)-6-biotinamidohexanohydrazide attached hydrophobically to silanized glass. The biotin-streptavidin protein interaction is used to carry out this immobilization. Alk. phosphatase catalyzes the dephosphorylation of a class of macrocyclic compds.: including CSPD [chloro-3-(4-methoxyspiro{1,2-dioxetane-3,2-trichloro-{3,3,1,1}-decan}-4-yl)phenyl phosphate] to a product species which emits energy by chemiluminescence. The authors can detect this chemiluminescence signal with a **photomultiplier** tube for both enzymic catalysis in soln. and the surface immobilized enzyme (streptavidin conjugate). This enzyme is inhibited by the organophosphorus class of pesticides as **well** as nerve agents. The enzyme is also inhibited by Be(II), Bi(III) as **well** as excess Zn(II), while the apoenzyme is reactivated by Zn(II). The authors demonstrate in this study that 2 representative organophosphorus pesticides inhibit the enzymic prodn. of **chemiluminescent** products. This is true for the enzyme conjugate both free in soln. and immobilized. The authors can detect pesticides down to .apprx.50 ppb for the enzyme in soln. and 500 ppb for surface-immobilized enzyme in a 100 .mu.L capillary. Detection of Zn(II) by apoenzyme reactivation occurs down to 3 ppb. Be(II) and Bi(III) are detected by inhibition down to 1 ppm.
SO Proc. SPIE-Int. Soc. Opt. Eng. (1995), 2441(Smart Materials), 12-22
CODEN: PSISDG; ISSN: 0277-786X

=> d l6 6-11 ti abs so

L6 ANSWER 6 OF 22 CA COPYRIGHT 2002 ACS
TI Quadratic autocatalysis and self-heating in hydrocarbon oxidation
AB The oxidn. of C4H10 under very fuel-rich conditions leads to isothermal reaction which obeys a quadratic autocatalytic rate law. When self-heating occurs, the max. rate is reached only in the final stages of the slow reaction. The accompanying **chemiluminescent** emission (from CH2O radical) is identified as the "pic d'arret" descibed by M. Luquin et al. (1968); it results from the enhancement of free-radical concns. as the max. of the autocatalytic reaction rate is reached under nonisothermal conditions. Criticality, leading to cool-flame phenomena at sub-atm. pressures, takes place as a result of the autocatalysis accompanied by self-heating. The exptl. features are described from measurements made by mass spectrometry, thermocouples, and **photomultiplier** in a **well** stirred, closed vessel. The results are interpreted by using simple numerical models representing quadratic autocatalysis, and routes to the prediction of criticality in hydrocarbon oxidn. are discussed against the background of the formal anal. theory derived by P. N. Melentiev et al. (1941). Their crit. criterion based on the N. N. Semenov (1935) parameter .psi.er, familiar in the context of thermal ignition theory, matches the numerical and exptl. conditions very satisfactory. The present results are relevant to the prediction of spontaneous explosion hazards where hydrocarbon gases or vapors may mix with limited amts. of air.
SO J. Chem. Soc., Faraday Trans. 1 (1989), 85(10), 3471-9
CODEN: JCFTAR; ISSN: 0300-9599

L6 ANSWER 7 OF 22 CA COPYRIGHT 2002 ACS

TI Selective chlorine dioxide determination using gas-diffusion flow injection analysis with **chemiluminescent** detection

AB An automated **chemiluminescent** technique was developed utilizing the advantages of gas-diffusion flow injection anal. A gas-diffusion membrane separates the donor (sampling) stream from the acceptor (detecting) stream and removes ionic interferences. A novel chemiluminescence flow-through detector cell is used to measure the concn. of ClO2 as a function of the intensity of the chemiluminescence produced from its reaction with luminol. The **chemiluminescent** reagent merges with the analyte directly in front of the **photomultiplier** tube in order to maximize the sensitivity of the system. The detection limit for ClO2 is approx. 5 ppb. The method is over 1500 times more selective for ClO2 than for Cl on the mol basis. This method eliminates interference from Fe and Mn compds., as **well** as other oxychlorinated compds., such as chlorite ion and chlorate ion.

SO Anal. Chem. (1986), 58(7), 1524-7
CODEN: ANCHAM; ISSN: 0003-2700

L6 ANSWER 8 OF 22 CA COPYRIGHT 2002 ACS

TI Spectroscopic analysis of lead oxide chemiluminescence

AB A PbO flame was generated in a flow tube reactor by reacting Pb vapor generated in a furnace with the oxidizers O2 and N2O. The emissions from the **chemiluminescent** flames were analyzed by means of a Jarrell Ash 0.25 m spectrograph and **photomultiplier** operating in the region 2000-8000 .ANG.. Rovibronic bands assignable to the x-a, x-b, x-A, x-B electronic systems were obsd. The assignments compare **well** with published work. Spectra obtained with the 2 different oxidizers were compared. Significant differences in spectral line intensities were recorded. The pressure dependence of the intensities was also measured. Again, significant differences were recorded when the 2 different oxidizers were used. In the Pb + O2 reaction a low pressure enhancement of various lines was obsd. Significant differences between the chem. of these low pressure reactions and the chem. of similar reaction of high pressure were obsd.

SO Report (1981), AFIT/GEP/PH/81D-9; Order No. AD-A111175, 82 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1982, 82(13), 2676

L6 ANSWER 9 OF 22 CA COPYRIGHT 2002 ACS

TI Ozone monitoring system by **chemiluminescent** reaction of oil coated filter paper

AB Light is produced by the reaction of O3 with oil which covers a filter paper. The light has a fairly **well**-defined spectrum in the wavelength of 400-550 nm, and its intensity is generally strong from lubrication oil such as automotive engine oil. As an application of this phenomenon, a proto-type O3 monitoring system is set up. The monitor is composed of a reaction vessel with an optical window, a detection system and sample gas flow system. The gas contg. O3 is introduced into the vessel through a glass nozzle, and sprayed onto the surface of an oil coated filter paper. The light generated in the vessel passes through the window and is detected by a **photomultiplier** tube. Its output signal per 10 s is continuously measured by a photon-counter. To obtain high and invariable sensitivity to O3 concn., the app. is operated under the typical condition of sample flow rate and pressure in the vessel, 1.2 L/min and 300 mm Hg, resp. The response of the instrument varies linearly with O3 concn. over the range of 0-0.19 ppm and the variation of the response is within 3% with O3 concn. of 0.15 ppm for 3 mo. For atm. O3, the accuracy is .apprx.0.01 ppm. The daily O3 concn. measured by this monitor is almost in agreement with the concn. obtained by a conventional chemiluminescence meter using C2H4.

SO Taiki Osen Gakkaishi (1981), 16(1), 35-43
CODEN: TOSGDC

L6 ANSWER 10 OF 22 CA COPYRIGHT 2002 ACS

TI **Chemiluminescent** technique in radiation dosimetry

AB A wide-band amplifier for radiation dosimetry with a rapid-response discriminator and a pulse counter should be able to treat the input of the

following parameters: (1) the length of the pulses of the low-noise **photomultiplier** is of the order 10 ns, (2) the dynamic range of the pulse load is up to 107 pulses/s, (3) the time and amplitude distributions of the signals correspond to Poisson statistics, (4) the level of the photocathode thermoemission noise of the **photomultiplier** is .apprx.100 pulses/s, and (5) the capacitance of the input RC-circuit is 10-20 pF. Such an amplifier improves the stabilization of the measurement characteristics, as **well** as the amplification and the discrimination ability of the schemes recording the chemiluminescence. The thermal stabilization of the measured samples is necessary owing to the temp. dependence of the chemiluminescence. The use of photomultipliers with a Poisson distribution is necessary to provide the single electron normalization. The characteristics of that detector are linear within the range up ot 15,000 R and probably higher.
SO Dozim. Ioniz. Izluch. (1976), 147-51. Editor(s): Muminov, M. I. Publisher: "Fan" Uzb. SSR, Tashkent, USSR.
CODEN: 36MRAQ

L6 ANSWER 11 OF 22 CA COPYRIGHT 2002 ACS
TI Scanning **photomultiplier** for studying **chemiluminescent** reactions in flow systems
AB A continuous vertical scanning photosensitive device is described which is capable of monitoring the radiation intensity of **chemiluminescent** reactions in cylindrical flow reactors. The output from the **photomultiplier** is fed to a conventional mv. recorder to obtain a plot of intensity as a function of time. This enables calcns. to be made of concns. and rate consts. of reaction for the species taking part in the **chemiluminescent** reaction, if the reactions occurring are **well** understood. The system increases the accuracy of measuring rates of reaction, greatly shortens the time required to carry out an expt., and is inexpensive to construct.
SO Rev. Sci. Instr. (1965), 36(1), 35-7

=> d l6 12-16 ti abs so

L6 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2002 ACS
TI Use of charge coupled devices for the simultaneous detection of multiple pesticides by imaging ELISA techniques
AB The **chemiluminescent** reaction between horse radish peroxidase (HRP)/ alk. phosphatase (AP) and the luminol/CSPD/hydrogen peroxide substrate is used in a multianal. ELISA approach to simultaneous anal. of different pesticides. The pesticides included in the present study were 2,4-D, atrazine and simazine. A novel variant of peroxidase (from transgenic tobacco, TOP) has also been investigated. The microformat ELISA previously described was employed using thick film hydrophobic pattern on glass plates with flat **wells** of 2 .mu.L capacity. In addn., sol-gel modified glass capillaries were also employed. As detection system for the **chemiluminescent** reaction we used a **photomultiplier** tube (PMT) or a charge coupled device (CCD) camera. For the PMT/CCD camera based assay the monoclonal antibodies (mAbs) were dild. 1:1000 and bound to the surface during an over night incubation at 4.degree.C. Non bound antibodies were removed by washing with PBST buffer and the free space was blocked with 2.7 mg mL-1 of the gelatin-based blocking reagent. For 2,4-D a detection range of 0.1-100 ng mL-1 was obtained. Work with real samples and with mixts. of pesticides is under way.
SO ACS Symp. Ser. (2000), 762(Chemical and Biological Sensors for Environmental Monitoring), 223-235
CODEN: ACSMC8; ISSN: 0097-6156

L6 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2002 ACS
TI In-situ stratospheric ozone measurements by means of a fast ozone sensor (FOZAN) onboard the M55-Geophysica aircraft
AB High time-resolved measurements of ozone during high-altitude flights can address many scientific question regarding stratospheric ozone depletion, exchange processes across the tropopause and potential vorticity barriers,

such as the polar vortices and the subtropical barrier, and the microphysics of ozone in clouds. A Fast OZone ANalyzer (FOZAN) was developed and installed on board M55-Gheophysica, a stratospheric platform able to reach an altitude of more than 20 km. FOZAN is a joint Russian-Italian instrument and uses the **chemiluminescent** heterophase reaction between ozone in the airflow and a solid state sensor; the luminescence intensity is proportional to ozone concn., and it is registered by a **photomultiplier**. The devices includes an automatic self-calibrator, as **well** as an optical modulator, pump, microprocessor unit, air valve, ozone generator, ozone destroyer, and thermostabilizer. This instrument comprises an electronic unit to control the instrument performance and to process measurement data. To improve the instrument sensitivity and measurement precision, synchronous digital detection and signal averaging are performed. The instrument lso features a built-in calibrated ozone generator. The instrument was tested during test flights in Italy and was operated successfully during flights over mid-latitudes and the Arctic region. A tropical campaign in the spring of 1999 over the InterTropical Convergence Zone (ITCZ) took place in the frame of the THESEO project. The paper presents the design of the instrument and the result of lab. tests, as **well** as preliminary results of scientific flights on board the M55- Geophysica aircraft.

SO Proc. SPIE-Int. Soc. Opt. Eng. (1999), 3756(Optical Spectroscopic Techniques and Instrumentation for Atmospheric and Space Research III), 502-510
CODEN: PSISDG; ISSN: 0277-786X

L6 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI A rapid and sensitive 384-microtiter **wells** format **chemiluminescent** enzyme immunoassay for clenbuterol

AB A fast and sensitive **chemiluminescent** (CL) enzyme immunoassay for clenbuterol (CLB) anal. in bovine urine has been developed. Clenbuterol (CLB) specific polyclonal antibodies were raised in rabbit using a CLB azo deriv. conjugated with ovalbumin. Horseradish peroxidase (HRP) was used as label and conjugated with the same deriv. In the developed competitive method, antibodies were immobilized on 384-**wells** black polystyrene microtiter plates; the sample vol. was 20 .mu.l and HRP-labeled CLB activity was immediately measured, using different CL substrates, after 10 min incubation time. Emitted light was recorded using a sensitive back-illuminated, cooled CCD camera or a conventional, **photomultiplier**-based microtiter plate reader. The developed method fulfills all the requirements of precision (CV below 10%) and accuracy (mean recovery from 96 to 110%) with a detection limit of 0.08 ppb in urine matrix. The use of 384-**wells** microtiter plate allows a 5-fold redn. in reagent quantity and the CL detection improves the detectability of the HRP-labeled tracer, thus reducing anal. time. The developed method is therefore suitable for high-throughput screening of CLB in urine samples, with reduced costs as compared with conventional colorimetric enzyme immunoassays, thanks to the possibility to optimize the system in non-equil. immunol. conditions and with a very fast chemiluminescence detection of the HRP-label activity.

SO Talanta (2000), 52(2), 311-318
CODEN: TLNTA2; ISSN: 0039-9140

L6 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI Method and analyzer for immunoassay using magnetic particles

AB Magnetic particles as solid phase are mixed in a reaction vessel with a sample, e.g., body fluid, that contains the analyte TSH as **well** as a labeled antibody. A **chemiluminescent** labeling compd. is bound to the magnetic particles by an immune reaction. The fluid contg. the mixt. is introduced into a chamber inside a flow-through cell wherein the width of the chamber is larger than the depth. The magnetic particles in the fluid are retained with a magnet so that they are spread out over the inner surface of the chamber while the other material is removed. The chamber then is filled with a buffer soln. that contains an attracting substance. By applying a potential to the electrodes arranged in the chamber, the labeling compd. on the magnetic particles is stimulated to emit electrochemiluminescence, and the luminescence is detected with a

photomultiplier.
SO Ger. Offen., 23 pp.
CODEN: GWXXBX

L6 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2002 ACS
TI Integrating biotinylated polyalkylthiophene thin films with biological macromolecules: Biosensing organophosphorus pesticides and metal ions with surface-immobilized alkaline phosphatase utilizing chemiluminescence measurements
AB The authors describe a methodol. for immobilizing the enzyme alk. phosphatase onto a glass surface using a novel biotinylated copolymer poly(3-undecylthiophene-co-3-thiophenecarboxaldehyde)-6-biotinamidohexanohydrazide attached hydrophobically to silanized glass. The biotin-streptavidin protein interaction is used to carry out this immobilization. Alk. phosphatase catalyzes the dephosphorylation of a class of macrocyclic compds.: including CSPD [chloro-3-(4-methoxyspiro{1,2-dioxetane-3,2-trichloro-{3,3,1,1}-decan}-4-yl)phenyl phosphate] to a product species which emits energy by chemiluminescence. The authors can detect this chemiluminescence signal with a **photomultiplier** tube for both enzymic catalysis in soln. and the surface immobilized enzyme (streptavidin conjugate). This enzyme is inhibited by the organophosphorus class of pesticides as **well** as nerve agents. The enzyme is also inhibited by Be(II), Bi(III) as **well** as excess Zn(II), while the apoenzyme is reactivated by Zn(II). The authors demonstrate in this study that 2 representative organophosphorus pesticides inhibit the enzymic prodn. of **chemiluminescent** products. This is true for the enzyme conjugate both free in soln. and immobilized. The authors can detect pesticides down to .apprx.50 ppb for the enzyme in soln. and 500 ppb for surface-immobilized enzyme in a 100 .mu.L capillary. Detection of Zn(II) by apoenzyme reactivation occurs down to 3 ppb. Be(II) and Bi(III) are detected by inhibition down to 1 ppm.
SO Proc. SPIE-Int. Soc. Opt. Eng. (1995), 2441(Smart Materials), 12-22
CODEN: PSISDG; ISSN: 0277-786X

=> d l6 17-22 ti abs so

L6 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2002 ACS
TI Quadratic autocatalysis and self-heating in hydrocarbon oxidation
AB The oxidn. of C4H10 under very fuel-rich conditions leads to isothermal reaction which obeys a quadratic autocatalytic rate law. When self-heating occurs, the max. rate is reached only in the final stages of the slow reaction. The accompanying **chemiluminescent** emission (from CH2O radical) is identified as the "pic d'arret" descibed by M. Luquin et al. (1968); it results from the enhancement of free-radical concns. as the max. of the autocatalytic reaction rate is reached under nonisothermal conditions. Criticality, leading to cool-flame phenomena at sub-atm. pressures, takes place as a result of the autocatalysis accompanied by self-heating. The exptl. features are described from measurements made by mass spectrometry, thermocouples, and **photomultiplier** in a **well** stirred, closed vessel. The results are interpreted by using simple numerical models representing quadratic autocatalysis, and routes to the prediction of criticality in hydrocarbon oxidn. are discussed against the background of the formal anal. theory derived by P. N. Melentiev et al. (1941). Their crit. criterion based on the N. N. Semenov (1935) parameter .psi.er, familiar in the context of thermal ignition theory, matches the numerical and exptl. conditions very satisfactory. The present results are relevant to the prediction of spontaneous explosion hazards where hydrocarbon gases or vapors may mix with limited amts. of air.
SO J. Chem. Soc., Faraday Trans. 1 (1989), 85(10), 3471-9
CODEN: JCFTAR; ISSN: 0300-9599

L6 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2002 ACS
TI Selective chlorine dioxide determination using gas-diffusion flow injection analysis with **chemiluminescent** detection

AB An automated **chemiluminescent** technique was developed utilizing the advantages of gas-diffusion flow injection anal. A gas-diffusion membrane separates the donor (sampling) stream from the acceptor (detecting) stream and removes ionic interferences. A novel chemiluminescence flow-through detector cell is used to measure the concn. of ClO2 as a function of the intensity of the chemiluminescence produced from its reaction with luminol. The **chemiluminescent** reagent merges with the analyte directly in front of the **photomultiplier** tube in order to maximize the sensitivity of the system. The detection limit for ClO2 is approx. 5 ppb. The method is over 1500 times more selective for ClO2 than for Cl on the mol basis. This method eliminates interference from Fe and Mn compds., as **well** as other oxychlorinated compds., such as chlorite ion and chlorate ion.

SO Anal. Chem. (1986), 58(7), 1524-7
CODEN: ANCHAM; ISSN: 0003-2700

L6 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI Spectroscopic analysis of lead oxide chemiluminescence

AB A PbO flame was generated in a flow tube reactor by reacting Pb vapor generated in a furnace with the oxidizers O2 and N2O. The emissions from the **chemiluminescent** flames were analyzed by means of a Jarrell Ash 0.25 m spectrograph and **photomultiplier** operating in the region 2000-8000 .ANG.. Rovibronic bands assignable to the x-a, x-b, x-A, x-B electronic systems were obsd. The assignments compare **well** with published work. Spectra obtained with the 2 different oxidizers were compared. Significant differences in spectral line intensities were recorded. The pressure dependence of the intensities was also measured. Again, significant differences were recorded when the 2 different oxidizers were used. In the Pb + O2 reaction a low pressure enhancement of various lines was obsd. Significant differences between the chem. of these low pressure reactions and the chem. of similar reaction of high pressure were obsd.

SO Report (1981), AFIT/GEP/PH/81D-9; Order No. AD-A111175, 82 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1982, 82(13), 2676

L6 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI Ozone monitoring system by **chemiluminescent** reaction of oil coated filter paper

AB Light is produced by the reaction of O3 with oil which covers a filter paper. The light has a fairly **well**-defined spectrum in the wavelength of 400-550 nm, and its intensity is generally strong from lubrication oil such as automotive engine oil. As an application of this phenomenon, a proto-type O3 monitoring system is set up. The monitor is composed of a reaction vessel with an optical window, a detection system and sample gas flow system. The gas contg. O3 is introduced into the vessel through a glass nozzle, and sprayed onto the surface of an oil coated filter paper. The light generated in the vessel passes through the window and is detected by a **photomultiplier** tube. Its output signal per 10 s is continuously measured by a photon-counter. To obtain high and invariable sensitivity to O3 concn., the app. is operated under the typical condition of sample flow rate and pressure in the vessel, 1.2 L/min and 300 mm Hg, resp. The response of the instrument varies linearly with O3 concn. over the range of 0-0.19 ppm and the variation of the response is within 3% with O3 concn. of 0.15 ppm for 3 mo. For atm. O3, the accuracy is .apprx.0.01 ppm. The daily O3 concn. measured by this monitor is almost in agreement with the concn. obtained by a conventional chemiluminescence meter using C2H4.

SO Taiki Osen Gakkaishi (1981), 16(1), 35-43
CODEN: TOSGDC

L6 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI **Chemiluminescent** technique in radiation dosimetry

AB A wide-band amplifier for radiation dosimetry with a rapid-response discriminator and a pulse counter should be able to treat the input of the following parameters: (1) the length of the pulses of the low-noise **photomultiplier** is of the order 10 ns, (2) the dynamic range of

the pulse load is up to 107 pulses/s, (3) the time and amplitude distributions of the signals correspond to Poisson statistics, (4) the level of the photocathode thermoemission noise of the **photomultiplier** is .apprx.100 pulses/s, and (5) the capacitance of the input RC-circuit is 10-20 pF. Such an amplifier improves the stabilization of the measurement characteristics, as **well** as the amplification and the discrimination ability of the schemes recording the chemiluminescence. The thermal stabilization of the measured samples is necessary owing to the temp. dependence of the chemiluminescence. The use of photomultipliers with a Poisson distribution is necessary to provide the single electron normalization. The characteristics of that detector are linear within the range up ot 15,000 R and probably higher.

SO Dozim. Ioniz. Izluch. (1976), 147-51. Editor(s): Muminov, M. I. Publisher: "Fan" Uzb. SSR, Tashkent, USSR.
CODEN: 36MRAQ

L6 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2002 ACS

TI Scanning **photomultiplier** for studying **chemiluminescent** reactions in flow systems

AB A continuous vertical scanning photosensitive device is described which is capable of monitoring the radiation intensity of **chemiluminescent** reactions in cylindrical flow reactors. The output from the **photomultiplier** is fed to a conventional mv. recorder to obtain a plot of intensity as a function of time. This enables calcns. to be made of concns. and rate consts. of reaction for the species taking part in the **chemiluminescent** reaction, if the reactions occurring are **well** understood. The system increases the accuracy of measuring rates of reaction, greatly shortens the time required to carry out an expt., and is inexpensive to construct.

SO Rev. Sci. Instr. (1965), 36(1), 35-7

=> d his

(FILE 'HOME' ENTERED AT 14:30:59 ON 21 FEB 2002)

FILE 'CA, CAPLUS' ENTERED AT 14:31:15 ON 21 FEB 2002

L1	2664993	S	RESERVOIR# OR WELL#
L2	2	S	PHOTOMULTIPIER
L3	15427	S	PHOTOMULTIPLIER
L4	1272	S	L1 AND L3
L5	14287	S	CHEMILUMINESCENT
L6	22	S	L4 AND L5

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	2866	microtiter adj well$	USPAT; US-PGPUB	2002/02/21 13:15	
2	BRS	L2	115	1 and 422/50-104.ccls.	USPAT; US-PGPUB	2002/02/21 13:35	
3	BRS	L3	12093	photomultiplier	USPAT; US-PGPUB	2002/02/21 13:19	
4	BRS	L4	25	2 and 3	USPAT; US-PGPUB	2002/02/21 13:23	
5	BRS	L5	20	4 and wash	USPAT; US-PGPUB	2002/02/21 13:55	
6	BRS	L6	8459	5 anc chemiluminescent	USPAT; US-PGPUB	2002/02/21 13:24	
7	BRS	L7	8	5 and chemiluminescent	USPAT; US-PGPUB	2002/02/21 13:24	
8	BRS	L8	41	2 and chemiluminescent	USPAT; US-PGPUB	2002/02/21 13:36	
9	BRS	L9	23066	label$ same antibod$	USPAT; US-PGPUB	2002/02/21 13:37	
10	BRS	L10	35	8 and 9	USPAT; US-PGPUB	2002/02/21 13:52	
11	BRS	L11	0	wash and 6232114.pn.	USPAT; US-PGPUB	2002/02/21 13:53	

Used Also reservoir + ~~micro~~ multi-well in place of number 1 above

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
12	BRS	L12	13370	microtiter adj plate$	USPAT; US-PGPUB	2002/02/21 13:57	
13	BRS	L13	470	12 and 422/50-104.ccls.	USPAT; US-PGPUB	2002/02/21 13:58	
14	BRS	L14	71	3 and 13	USPAT; US-PGPUB	2002/02/21 13:58	
15	BRS	L15	47	14 and wash	USPAT; US-PGPUB	2002/02/21 13:59	
16	BRS	L16	0	15 and chemiluninescent	USPAT; US-PGPUB	2002/02/21 13:59	
17	BRS	L17	20	15 and chemiluminescent	USPAT; US-PGPUB	2002/02/21 13:59	

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L1          4328 S ANTI (W) INSULIN
L2            48 S ANTI (W) C (W) PEPTIDE
L3        529215 S MONOCLONAL
L4             7 S L2 (S) L3
L5           326 S L1 (S) L3
L6             2 DUPLICATE REM L4 (5 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 16:01:06 ON 21 FEB 2002

     FILE 'CAPLUS, MEDLINE, BIOSIS, CA' ENTERED AT 16:08:27 ON 21 FEB 2002
L7           125 DUPLICATE REM L5 N (201 DUPLICATES REMOVED)
L8          2179 S MICROTITER (W) WELL#
L9             0 S L7 AND L8
L10        15153 S MICROTITER (W) PLATE#
L11            3 S L7 AND L10

     FILE 'STNGUIDE' ENTERED AT 16:13:36 ON 21 FEB 2002

     FILE 'CAPLUS, MEDLINE, BIOSIS, CA' ENTERED AT 16:19:49 ON 21 FEB 2002
L12            0 S L7 AND PHOTOMULTIPLIER
L13            4 S L7 AND FLUORESCEN#
L14
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L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1994:241669 CAPLUS
DN 120:241669
TI Enzyme-linked immunosorbent assay method for human autophosphorylated insulin receptor
AU Hagino, Haruhiko; Shii, Kozui; Yokono, Koichi; Matsuba, Hiroshi; Yoshida, Masaki; Hosomi, Yoichi; Okada, Yumi; Kishimoto, Miyako; Hozumi, Toshiki
CS Hyogo Inst. Clin. Res., Akashi, 673, Japan
SO Diabetes (1994), 43(2), 274-80
CODEN: DIAEAZ; ISSN: 0012-1797
DT Journal
LA English

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS

TI Enzyme-linked immunosorbent assay method for human autophosphorylated insulin receptor

AB The insulin receptors from erythrocytes of 50 patients with non-insulin-dependent diabetes mellitus were tested for their ability to autophosphorylate. The assay was performed by a new ELISA system that used **monoclonal anti-insulin** receptor antibodies absorbed to **microtiter plates** as a first antibody and polyclonal antphosphotyrosine antibody as a labeled second antibody. By this assay, 3 patients were identified with defects in their insulin receptor kinase, although their defects appeared heterogeneous. Patient 1 had 85% less maximal autophosphorylation with a normal ED50 (1.6 .times. 10-9M insulin). Patient 2, who had polycystic ovary disease, had a 49.2% decrease in maximal autophosphorylation of insulin receptors, and the ED50 was shifted to the right (5.6 .times. 10-8M). Patient 3 with acanthosis nigricans had a normal maximal autophosphorylation, but the ED50 shifted to the right (2.9 .times. 10-8M). The mechanisms for the diversity detected in this assay is not known, but this technique has sufficient specificity and sensitivity to be used to screen for insulin-resistant patients who have a lack of kinase activity.

SO Diabetes (1994), 43(2), 274-80
CODEN: DIAEAZ; ISSN: 0012-1797

NSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
AN 1997:772170 CAPLUS
DN 128:70867
TI Immunoreactive proinsulin detected by enzyme-linked immunosorbent assay
AU Emura, Masahiko; Nakanome, Hiroyuki; Ito, Akio
CS YUKA MEDIAS COMPANY, LTD., Ibaraki, 300-03, Japan
SO Biomed. Res. (1997), 18(5), 389-393
CODEN: BRESD5; ISSN: 0388-6107
PB Biomedical Research Foundation
DT Journal
LA English

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
AN 1994:693 CAPLUS
DN 120:693
TI Highly sensitive enzyme immunoassay of proinsulin immunoreactivity with use of two monoclonal antibodies
AU Kjems, Lise Lund; Roeder, Michael E.; Dinesen, Bo; Hartling, Svend G.; Joergensen, Peer Nobert; Binder, Christian
CS Steno Diabetes Cent., Gentofte, DK-2820, Den.
SO Clin. Chem. (Washington, D. C.) (1993), 39(10), 2146-50
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English

ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1

TI Immunoreactive proinsulin detected by enzyme-linked immunosorbent assay

AB A sensitive ELISA for human proinsulin was developed by the modification of the method reported using monoclonal antibodies. In the present method, two **monoclonal** antibodies, an **anti-C -peptide** antibody bound to microtiter plate, and a biotin-labeled anti-insulin antibody were used. This assay was specific for proinsulin and failed to detect both insulin and C-peptide. The minimal detection limit of this assay was approx. 1 pM. Immunoreactive proinsulin levels in serum of normal subjects, ranged from 1.7 to 8.7 pM with the mean of 4.6 pM. The ranges for the intra-and inter-assay coeffs. of variance were 3.1-3.7% and 5.0-14.9%, resp. Reverse phase HPLC anal. of serum of normal subject, as measured with this assay system, revealed two immunoreactive (IR-) forms. One form eluted at the same position as that of authentic proinsulin and the other was detected in a more hydrophilic part of the chromatogram (shorter retention time). Elution profiles of IR-insulin and IR-C-peptide in human serum were also examd. by the present reverse phase HPLC and compared to those of IR-proinsulins.

SO Biomed. Res. (1997), 18(5), 389-393
CODEN: BRESD5; ISSN: 0388-6107

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2

TI Highly sensitive enzyme immunoassay of proinsulin immunoreactivity with use of two monoclonal antibodies

AB A highly sensitive two-site sandwich ELISA measuring total proinsulin immunoreactive material in serum or plasma was developed. The assay was based on two **monoclonal** antibodies, an **anti-C -peptide** antibody bound to a microtest plate and a biotin-labeled anti-insulin antibody. The detection limit (3 SD above zero value) in buffer was 0.05 pmol/L, corresponding to 0.25 pmol/L in human serum (dild. 1:5). The linear calibrator range was 0.05-20 pmol/L. Interassay relative std. deviations were 4.7% at a median (range) of 2.3 pmol/L (1.4-2.8 pmol/L), 6.7% at 5.1 pmol/L (3.3-8.0 pmol/L), and 8.7% at 10.0 pmol/L (8-12 pmol/L). Mean anal. recovery of added human proinsulin (hPI) (2, 5, and 10 pmol/L) to serum was 84% (range 68-128%). Human insulin and human C-peptide did not cross-react at 5000 and 10,000 pmol/L, resp. The four major proinsulin conversion intermediates reacted 65-99%; split(32-33)hPI 74%, des(31,32)hPI 65%, split(65-66)hPI 78%, and des(64,65)hPI 99%. All serum values from 38 fasting healthy subjects were above the detection limit: median (range) 4.0 (2.1-12.6) pmol/L.

SO Clin. Chem. (Washington, D. C.) (1993), 39(10), 2146-50
CODEN: CLCHAU; ISSN: 0009-9147